NPDES PERMIT NO. NM0000108
STATEMENT OF BASIS

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

APPLICANT:	El Paso Electric Company- Rio Grande Power Plant P.O. Box 982 El Paso, TX 79960
ISSUING OFFICE:	U.S. Environmental Protection Agency Region 6 1445 Ross Avenue Dallas, Texas 75202-2733
PREPARED BY:	Isaac Chen Environmental Engineer NPDES Permits Branch (6WQ-P) Water Quality Protection Division VOICE: 214-665-7364 FAX: 214-665-2191 EMAIL: chen.isaac@epa.gov
PERMIT ACTION:	Proposed reissuance of the current permit issued October 27, 2003, with an effective date of December 1, 2003, and an expiration date of September 30, 2008.
DATE PREPARED:	August 4, 2008

40CFR CITATIONS: Unless otherwise stated, citations to 40CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of June 6, 2008.

CERTIFICATION: The permit is in the process of certification by the State agency following regulations promulgated at 40 CFR 124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service; and to the National Marine Fisheries Service prior to the publication of that notice.

FINAL DETERMINATION: The public notice describes the procedures for the formulation of final determinations.

CHANGES FROM PREVIOUS PERMIT

There are changes from the current permit issued October 27, 2003, with an effective date of December 1, 2003, and an expiration date of September 30, 2008.

1. Delete Internal Outfalls 206, 207, and 208;
2. Add seasonal monitoring requirements for total dissolved solids, sulfate and chloride;
3. Change pH range from 6.0 – 9.0 to 6.6 – 9.0; and
4. Removal of temperature limitations and monitoring requirements.

I. APPLICANT ACTIVITY

Under Standard Industrial Classification (SIC) Code(s) 4911, the applicant currently operates the Rio Grande power plant in Sunland Park, Dona Ana County, NM.

II. DISCHARGE LOCATION

As described in the application, the plant is located in Dona Ana County, New Mexico. Discharges from two outfalls flow into Rio Grande in segment number 20.6.4.101 of the Rio Grande Basin.

III. RECEIVING STREAM USES

The designated uses of the receiving water(s) in Segment 20.6.4.101 of Rio Grande Basin are irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat, and secondary contact.

IV. STREAM STANDARDS

The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters" (the NMWQS), 20.6.4 NMAC, as amended through August 1, 2007. State antidegradation policy applies to all state water quality standards.

V. DISCHARGE DESCRIPTION

Discharges from Outfall 001 mainly consist of storm runoff and may also consist of emergency discharges from Reverse Osmosis and Deionization (RO/DI) wastewater, metal cleaning wastewater, Oil/Water separator discharge, and Upper Canal overflow. Discharges from Outfall 002 may consist of storm runoff and cooling tower blowdown. The average discharge flow from Outfall 001 is about 0.365 million gallons per day (MGD) and about 80 to 85% of the wastewater is composed of emergency discharges. The discharge of cooling tower blowdown from Outfall 002 is 0.792 MGD. The sources of cooling water are well water, the discharge from oil/water separators and storm water. Effluent data reported in the monthly DMRs and in the application indicate that discharges from Outfall(s) 001 and 002 have reasonable potential to cause or contribute a violation of acute TRC

standard and discharge from Outfall 002 has potential to exceed selenium standard for aquatic life use.

VI. TENTATIVE DETERMINATION

On the basis of preliminary staff review and after consultation with the State of New Mexico, the Environmental Protection Agency has made a tentative determination to issue a permit for the discharge described in the application.

VII. PROPOSED EFFLUENT LIMITATIONS

The proposed effluent limitations for those pollutants proposed to be limited are as follows:

Please see the proposed draft permit.

VIII. DRAFT PERMIT RATIONALE

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under 40 CFR 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed:

A. REASON FOR PERMIT

The current permit was issued October 27, 2003 with an effective date of December 1, 2003 and an expiration date of September 30, 2008. The permit renewal application was sent to EPA dated March 7, 2008 and received by EPA dated March 14, 2008. This permit term is proposed to be five years in accordance with EPA Region 6's Basin Management Approach for NPDES Permitting for the Lower Rio Grande River Basin.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND/OR CONDITIONS

Regulations promulgated at 40 CFR 122.44(a) require technology-based effluent limitations to be placed in NPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgment) in the absence of guidelines, or on a combination of the two.

The technology-based effluent limitations guidelines (ELG) in the current permit are retained. The ELG of TSS, oil & grease, total copper and total iron are retained for metal cleaning waste sources at internal outfalls 106, 107, and 108. Internal Outfalls 206, 207 and 208 were planed for future Phase II project to replace internal outfalls 106, 107 and 108, therefore they do not exist. The draft permit deletes these internal outfalls because outfall numbers 106, 107 and 108 can be retained after completeness of Phase II. The ELG of TSS and oil & grease for low volume wastes apply at two main Outfalls 001 and 002. The discharge at Outfall 002 is cooling tower blowdown which consists

of various sources of water. Part 423.13 requires that the maximum concentration and the average concentration for 126 priority pollutants (Appendix A) contained in chemicals added for cooling tower maintenance are not detectable in the final discharge. According to the Development Document for the Steam Electric (EPA-440/1-82/029), the sources of those priority pollutants are chemical additives (p. 328). And the Document states: "The discharge of 124 toxic pollutants is prohibited in detectable amounts from cooling tower discharges if the pollutants come from cooling tower maintenance chemicals. (p.493)" The effluent characteristic data submitted with this application show that 126 priority pollutants, except for zinc, were not detected in the discharges. The Zinc concentration in Outfall 002 discharge was much lower than the ELG allowed 1 mg/l for zinc. The proposed permit adds a narrative condition which prohibits the use of any tower maintenance chemicals which contain any of the 126 priority pollutants.

A National Pollutant Discharge Elimination System (NPDES) permit for any new or existing facility (see special definitions at 40 C.F.R. §§ 125.83 and 125.133) operating a cooling water intake structure (CWIS) must contain permit conditions meeting the requirements applicable to CWISs under section 316(b) of the Clean Water Act (CWA). Section 316(b) of the CWA requires that the location, design, construction, and capacity of CWISs reflect the best technology available (BTA) for minimizing adverse environmental impact (AEI). Under current regulations, existing facilities are subject to section 316(b) conditions that reflect BTA for minimizing AEI on a case-by-case, best professional judgment (BPJ) basis. 40 C.F.R. §§ 125.90(b) and 401.14.

The El Paso Electric Rio Grande Station facility has used cooling tower technology and the make-up water is from municipal water supply and water well. Therefore, the facility is not subject to section 316(b). The facility is required to operate the cooling tower properly.

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS AND/OR CONDITIONS

1. GENERAL COMMENTS

Effluent limitations and/or conditions established in the draft permit are in compliance with State water quality standards and the applicable water quality management plan. Data from the following sources are used to calculate initial dilution, in-stream waste concentrations, and effluent limitations:

USGS Station:	USGS Station in Rio Grande at American Dam gage.
4Q3 Critical Low Flow:	50.02 cfs at USGS Station at American Dam. The USGS station is downstream from the discharger. Northwest WWTP is located between El Paso Electric and the gage and flow from this WWTP is about 10.8 cfs. The average flow from El Paso Electric is 1.79 cfs. Therefore, the critical low flow used in this permit is 50.02 - 10.8 – 1.79 = 37.43 cfs.
Ambient Monitoring Station:	LRG101.000109 - the Rio Grande at Santa Teresa Station in 1995 Intensive Water Quality Stream Surveys.
Stream TSS (mg/l):	54.9
Stream Hardness (mg/l):	273

2. POST THIRD ROUND POLICY AND STRATEGY

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited..." To insure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants (49 FR 9016-9019, 3/9/84)." In support of the national policy, Region 6 adopted the "Policy for Post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992. The Regional policy and strategy are designed to insure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard resulting in non-conformance with the provisions of 40 CFR Part 122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

3. IMPLEMENTATION

The Region is currently implementing its post third round policy in conformance with the Regional strategy. The NPDES permit contains technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

4. STATE STANDARDS

The applicable State Water quality Standards are “New Mexico Standards for Interstate and Intrastate Surface Waters,” effective on August 1, 2007. The effluent discharges to the Rio Grande in Segment No. 20.6.4.101 of the Rio Grande Basin. Acute aquatic life criteria and all applicable chronic criteria are also applied.

5. DILUTION CALCULATIONS

The critical low flow (4Q3) of the Rio Grande at upstream of outfall is about 36.22 cfs. The maximum flow at Outfall 001 is 0.365 MGD (0.57 cfs), so the critical dilution is about 1.5%. The maximum flow at Outfall 002 is 0.792 MGD (1.23 cfs), so the critical dilution is about 3.0%.

6. PERMIT EFFLUENT LIMITATIONS AND CONDITIONS

The Agency reviewed application and pollutant screening indicates that the discharge at Outfall 002 may have reasonable potential to cause or contribute to exceedances of acute TRC and acute selenium criteria for aquatic life uses. Therefore, water quality-based effluent limitation for TRC and total selenium are retained at Outfall 002 in this proposed permit. Monitoring frequencies for TRC and selenium are retained from the current permit. The acute TRC and selenium criteria apply to the end-of-pipe. Temperature limitations at both Outfalls 001 and 002 are proposed to be

removed because the facility does not discharge once through cooling water and the effluent temperatures reported have been 10 to 20 °F lower than the effluent limitations. The site-specific pH standard of 6.6 – 9.0 is established at the end-of-pipe. The NMED requires site-specific pH standard to be applied at end-of-pipe for all dischargers.

The Segment No. 20.6.4.101 has site-specific WQS for total dissolved solids (TDS) 2,000 mg/l or less, sulfate 500 mg/l or less, and chloride 400 mg/l or less, when the stream mean monthly flow is above 350 cfs. According to stream flow data at USGS Station 08364000 – Rio Grande at El Paso, the mean monthly flow may be greater than 350 cfs during March through October. Therefore, the draft permit establishes monitoring requirements for TDS, sulfate and chloride during the months of March to October.

7. AQUATIC TOXICITY TESTING

The State has established narrative criteria which, in part, state that

> "Surface waters of the State shall be free of toxic substances attributable to point or nonpoint source discharge in amounts, concentrations or combinations which are toxic to fish or other aquatic organisms; ..." (NMWQS 1102.F)

In a letter from Marcy Leavitt, NMED, to Claudia Hosch, EPA, December 16, 2005, NMED provided "Narrative Toxics Implementation Guidance – Whole Effluent Toxicity" (WET Guidance), an update to the 1995 Implementation Guidance. The discharge is to Rio Grande and the critical dilution of the discharge at Outfall 002 to the receiving stream is about 3%. Because the critical dilution is below 10%, an acute-to-chronic ratio of 10:1 is used to allow acute WET testing. In accordance with the WET Guidance, the facility is required to conduct WET test once per 6 months using a 48-hour acute test with Daphnia pulex and Pimephales promelas and a 30% critical dilution. WET test at Outfall 001 is not required unless emergency discharges are released to Lower Canal, which will discharge via Outfall 001.

8. SCHEDULE OF COMPLIANCE

None.

IX. ENDANGERED SPECIES

Recent county listings of endangered (E) and threatened (T) species identify the bald eagle (T), as federally listed endangered or threatened in Dona Ana County. Segment 2101 of Rio Grande is not within the critical habitat of Rio Grande silvery minnow, and silvery minnow has been determined to be extirpated in this County.

US Fish and Wildlife Service (FWS) stated in the letter dated 1/26/87 (Cons. #2-22-87-I-017) that no listed species would be affected by the proposed permit when EPA issued a public notice for the current permit in December 1986.

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. According to the most recent county listing of species, dated July 1, 2008, for the State of New Mexico, the following species may be present in the county where the proposed NPDES discharge occurs: interior least tern (E), Mexican spotted owl (T), northern aplomado falcon (E), southwestern willow flycatcher (E), Rio Grande silvery minnow (E), and Sneed pincushion cactus (E).

After review, EPA has determined that the reissuance of Permit No. NM0000108 will have "no effect" on listed threatened and endangered species nor will adversely modify designated critical habitat. EPA makes this determination based on the following:

1. Permit limitations are equivalent to conditions in the previously issued permit, dated October 27, 2003. The removal of limitations and monitoring requirements of temperatures are based on information which has demonstrated no reasonable potential for exceedance.

2. No changes have been made to the US Fish and Wildlife list of threatened and endangered species and critical habitat designation in the area of the discharge since prior issuance of the permit.

3. EPA concluded "no effect" during the previous issuance of the permit and has received no additional information since then which would lead to revision of that "no effect" determination.

4. EPA determines that Items 1, 2, and 3 result in no change to the environmental baseline established by the previous permit, therefore, EPA concludes that reissuance of this permit will have "no effect" on listed species and designated critical habitat.

X. 303(d) LIST

The 2006-2008 Clean Water Act section 303(d) list for New Mexico indicates the stream segment number 20.6.4.101 is not supporting secondary contact and Escherichia coli is the probable cause of impairment. The proposed permit does not authorize discharges of domestic wastewater and the nature of discharge does not have a reasonable potential to contribute E. coli.

XI. ADMINISTRATIVE RECORD - The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by 40 CFR Part 124.9:

A. PERMIT(S)

NPDES permit No. NM0000108 issued to El Paso Electric Company on October 27, 2003.

B. APPLICATION(S)

Application for NPDES Permit No. NM0000108 received by EPA dated March 14, 2008.